

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-8 without prejudice or disclaimer of the underlying subject matter, amend claims 9 and 16 and add claim 17 as set forth below:

1. (CANCELED).
2. (CANCELED).
3. (CANCELED).
4. (CANCELED).
5. (CANCELED).
6. (CANCELED).
7. (CANCELED).
8. (CANCELED).

9. (CURRENTLY AMENDED) A surface-processing method for a multilayer printed wiring board comprising the steps of:

etching the surface of a conductor pattern formed on at least one ~~surface~~ outer layer of a printed wiring board;

rinsing the surface of the printed wiring board the conductor pattern of which has been etched by said etching step;

removing air bubbles affixed to the surface of the printed wiring board by immersing the printed wiring board rinsed by said first rinsing step in a water-soluble pre-flux liquid in a processing vessel;

forming a pre-flux film on said conductor pattern ~~on~~ on said outer layer of said printed wiring board in the pre-flux liquid, freed of air bubbles, using an in-liquid spray provided in said pre-flux liquid in said processing vessel;

removing the pre-flux liquid from the surface of said printed wiring board carrying said pre-flux film and transferred from said processing vessel; and

rinsing the surface of said printed wiring board from the surface of which said pre-flux liquid has been removed by said liquid removing step.

10. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 9 wherein said etching step removes the surface of said conductor pattern by 1.5 to 2.5 m.

11. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 9 wherein said first rinsing step rinses the surface of the printed wiring board, the conductor pattern of which has been etched, with acid, then rinses the acid-rinsed surface with water under a condition of not less than 0.5 MPa/cm² and subsequently rinses the water-washed surface with water under a condition of not less than 5 lit/cm² min.

12. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 11 wherein said water washing is with pure water not lower than 35 C.

13. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 9 wherein said pre-flux film is mainly composed of an imidazole compound and is formed to a thickness of 0.2 to 0.3 m on said conductor pattern.

14. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 9 wherein said air bubble removing step uses a sponge-like roll.

15. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 9 wherein said pre-flux forming step transfers said printed wiring board using upper and lower paired rolls provided at a spacing from each other larger than the thickness of the printed wiring board.

16. (ORIGINAL) The surface-processing method for a printed wiring board according to claim 9 wherein said liquid removing step includes a sponge-like roll and a lower saucer in which said pre-flux liquid is stored in circulation on said lower saucer holding said sponge like roll, such that half of said sponge like roll is immersed in said pre-flex liquid.

17. (NEW) A method for forming a multilayer printed wiring board comprising the steps of:

etching the surface of a conductor pattern formed on at least one outer layer of a printed wiring board;

rinsing the surface of the printed wiring board the conductor pattern of which has been etched by said etching step;

removing air bubbles affixed to the surface of the printed wiring board by immersing the printed wiring board rinsed by said first rinsing step in a water-soluble pre-flux liquid in a processing vessel;

forming a pre-flux film on said conductor pattern of said outer layer of said printed wiring board in the pre-flux liquid, freed of air bubbles, using an in-liquid spray provided in said pre-flux liquid in said processing vessel;

removing the pre-flux liquid from the surface of said printed wiring board carrying said pre-flux film and transferred from said processing vessel; and

rinsing the surface of said printed wiring board from the surface of which said pre-flux liquid has been removed by said liquid removing step.